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10/691,577

10/24/2003

Yih Chang

CHAN3224/EM

6961

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7590

04/19/2006

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EXAMINER

QUARTERMAN, KEVIN J

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/691,577

Applicant(s)

CHANG ET AL.

Examiner

Kevin Quarterman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment and remarks received 09 January 2006 have been entered and overcome the claim objections cited in the previous office action mailed 17 November 2005.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Chang (US 2004/0057864).

4. The applied reference has a common assignee and inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

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5. Regarding independent claim 1, Chang discloses a silver alloy used in flat panel displays to serve as thin film electrodes or conductive wires (pg. 1, ¶ [0002]) comprising 80 to 99.8 mol% of silver; 0.1 to 10 mol% of copper; and 0.1 to 10 mol% of at least one transition metal selected from the group consisting of palladium, magnesium, gold, platinum, and the combinations thereof, wherein the total mole percentage of the silver alloy is 100 mol% (pg. 1, ¶ [0010]).

6. Regarding claim 2, Chang discloses at least one adhesion improver being titanium, aluminum, nickel, cobalt, or chromium (pg. 1, ¶ [0014]).

7. Regarding claim 3, Chang discloses the adhesion improver being in the range of 0.01 to 5 mol% (pg. 1, ¶ [0014]).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 4-23 are rejected under 35 U.S.C. 103(a) as being obvious over Sotoyama (US 6,805,977) in view of Chang (US 2004/0057864).

11. The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

12. Regarding independent claim 4, Figure 4 of Sotoyama shows an organic electroluminescent panel comprising a substrate (12); a plurality of first electrodes (14); a plurality of second electrodes (22); a plurality of conducting lines (38); and a plurality of organic electroluminescent media (24), wherein the first electrodes are arranged in

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parallel on the substrate; the organic electroluminescent media are disposed on the first electrodes; the second electrodes are disposed on the organic electroluminescent media; the conducting lines are connected to the first electrodes or the second electrodes.

13. Sotoyama teaches the limitations of independent claim 4 discussed earlier but fails to exemplify the conducting lines containing a silver alloy.

14. Chang teaches that it is known in the art to provide a silver alloy used in flat panel displays to serve as thin film electrodes or conductive wires (pg. 1, ¶ [0002]) comprising 80 to 99.8 mol% of silver; 0.1 to 10 mol% of copper; and 0.1 to 10 mol% of at least one transition metal selected from the group consisting of palladium, magnesium, gold, platinum, and the combinations thereof, wherein the total mole percentage of the silver alloy is 100 mol% (pg. 1, ¶ [0010]).

15. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the organic electroluminescent panel of Sotoyama with conducting line containing the silver alloy taught by Chang for improving the resistance, conduction, and adhesion characteristics of the device.

16. Regarding claim 5, Figure 4 of Sotoyama shows a plurality of auxiliary electrodes (40) that may contain the silver alloy of Chang.

17. Regarding claim 6, Figure 4 of Sotoyama shows the auxiliary electrodes arranged in parallel on the first electrodes or on the substrate.

18. Regarding claim 7, Chang discloses a silver alloy comprising 80 to 99.8 mol% of silver; 0.1 to 10 mol% of copper; and 0.1 to 10 mol% of at least one transition metal

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selected from the group consisting of palladium, magnesium, gold, platinum, and the combinations thereof, wherein the total mole percentage of the silver alloy is 100 mol% (pg. 1, ¶ [0010]).

19. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sotoyama (US 6,805,977) and Chang (US 2004/0057864) as applied to claim 4 above, and further in view of Sakemura (US 6,404,124).

20. Sotoyama and Chang teach the limitations of independent claim 4 discussed above but fail to exemplify a plurality of isolating walls.

21. Figure 13 of Sakemura teaches that it is known in the art to provide display panels with isolating walls (RR) for separating the front and rear substrates.

22. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the isolating walls of Sakemura in the device of Sotoyama for providing separation between substrates.

23. Regarding claim 9, Figure 13 of Sakemura shows the isolating walls protruding from the substrate and having an overhanging portion projecting in a direction to the substrate.

24. Regarding claim 10, Sotoyama discloses the organic electroluminescent panel further comprising a pixel-defining layer (protective layer) formed on the first electrodes (col. 21, ln. 23-26).

25. Regarding claim 11, Sotoyama discloses the pixel-defining layer being made of polyimide (col. 21, ln. 39).

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26. Regarding claim 12, Chang discloses at least one adhesion improver being titanium, aluminum, nickel, cobalt, or chromium (pg. 1, ¶ [0014]).
27. Regarding claim 13, Chang discloses at least one adhesion improver being titanium, aluminum, nickel, cobalt, or chromium (pg. 1, ¶ [0014]).
28. Regarding claim 14, Chang discloses the adhesion improver being in the range of 0.01 to 5 mol% (pg. 1, ¶ [0014]).
29. Regarding claim 15, Chang discloses the adhesion improver being in the range of 0.01 to 5 mol% (pg. 1, ¶ [0014]).
30. Regarding claim 16, Figure 13 of Sakemura shows the isolating walls parallel with each other.
31. Regarding claim 17, Figure 2 of Sotoyama shows the projection of the second electrodes on the substrate intersecting perpendicularly with that of the first electrodes on the substrate.
32. Regarding claim 18, Sotoyama discloses the substrate being selected from the group consisting of the glass substrates, the plastic substrates, and the flexible substrates (col. 17, ln. 54-56).
33. Regarding claim 19, Sotoyama discloses the plastic substrates and the flexible substrates made of the materials selected from the group consisting of polycarbonate, polyester, cyclic olefin copolymer, metallocene-based cyclic olefin copolymer, thin glass, and combinations thereof (col. 17, ln. 57-65).
34. Regarding claim 20, Figure 4 of Sotoyama shows the organic electroluminescent medium constructed of single layer or multilayer structure.



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35. Regarding claim 21, Sotoyama discloses the organic electroluminescent medium constructed of the multilayer structure including a hole injecting layer, a hole transporting layer, a light-emitting layer, an electron transporting layer, and an electron injecting layer (col. 15, ln. 40-47).

36. Regarding independent claim 22, Figure 4 of Sotoyama shows an organic electroluminescent panel comprising a substrate (12); a plurality of first electrodes (14); a plurality of second electrodes (22); a plurality of conducting lines (38); a plurality of auxiliary electrodes (40); and a plurality of organic electroluminescent media (24), wherein the first electrodes are arranged in parallel on the substrate; the organic electroluminescent media are disposed on the first electrodes; the second electrodes are disposed on the organic electroluminescent media; the conducting lines are connected to the first electrodes or the second electrodes.

37. Regarding claim 23, Figure 4 of Sotoyama shows the auxiliary electrodes arranged in parallel on the first electrodes or on the substrate.

***Allowable Subject Matter***

38. The indicated allowability of claims 1-26 is withdrawn in view of the newly discovered references.

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**Contact Information**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Quarterman  
Examiner  
Art Unit 2879

kg   
17 April 2006

  
Joseph Williams  
Primary Examiner  
Art Unit 2879